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Mammal fauna during the Late Pleistocene and Holocene in the far northeast of Europe

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Table S2. Environmental preferences of the modern mammal species of the European north-east.

Species	Biome	Biotope	Climate	
			temperature	humidity
Russian desman – <i>Desmana moschata</i>	mixed, broad leaved forests and forest-steppe	riparian habitats	mesothermic	hydrophilous
European mole – <i>Talpa europae</i>	from forest-tundra to forest-steppe	various habitats avoiding wet biotops	eurythermic	mesophilous
Mountain hare – <i>Lepus timidus</i>	from tundra to forest-steppe	all kinds of forest habitats, prefers sparse forest	eurythermic	mesophilous
Steppe pika – <i>Ochotona pusilla</i>	steppe	typical semi-desert and steppe grasslands	mesothermic	xerophilous
Eurasian beaver – <i>Castor fiber</i>	forest	riparian habitats with shrubby vegetation	mesothermic	hydrophilous
Red squirrel – <i>Sciurus vulgaris</i>	coniferous and mixed forests	high-density forest	mesothermic	mesophilous
Grey hamster – <i>Cricetulus migratorius</i>	from forest-steppe to desert	various grasslands	mesothermic	xerophilous
European hamster – <i>Cricetus cricetus</i>	broad leaved forest and steppe	various grasslands	mesothermic	xerophilous
Ground squirrel – <i>Spermophilus</i> sp.	forest-steppe and steppe	various grasslands	mesothermic	xerophilous
Bobak marmot – <i>Marmota bobak</i>	from forest-steppe to steppe	various steppe habitats, avoid wet places and areas with high groundwater level	mesothermic	xerophilous
Northern birch mouse – <i>Sicista</i>	from tundra to steppe	various forest habitats preferring biotops with rich	eurythermic	mesophilous

sp.		grass		
Grey red-backed vole – <i>Clethrionomys rufocanus</i>	coniferous forest	all kind of forest habitats preferring rocky biotopes	mesothermic preferring temperate conditions	mesophilous
Bank vole – <i>Clethrionomys glareolus</i>	coniferous and broad leaved forests	all kinds of forest habitats	mesothermic species preferring temperate conditions	mesophilous
Northern red-backed vole – <i>Clethrionomys rutilus</i>	from tundra to mixed forest	all kinds of forest habitats, among other forest species reaches tundra most far to the north	mesothermic species preferring temperate conditions	mesophilous
Steppe lemming – <i>Lagurus lagurus</i>	from forest- steppe to semi- desert	various grasslands, avoid shrublands	mesothermic	xerophilous
Collared lemming – <i>Dicrostonyx</i> sp.	tundra	typical tundra biotopes except for wet habitats	cryothermic	xerophilous
Siberian lemming – <i>Lemmus sibiricus</i>	tundra	wet tundra biotopes	cryothermic	hydrophilous
Wood lemming – <i>Myopus schisticolor</i>	coniferous forest	various forest habitats with mosses	mesothermic	hydrophilous
European water vole – <i>Arvicola terrestris</i>	from tundra to steppe	riparian habitats but mainly in summer, whereas in wintertime it occupies elevated areas far from water bodies	eurythermic	hydrophilous
Narrow-sculled vole – <i>Microtus</i>	tundra and steppe	in tundra: typical tundra biotopes except for wet	mesothermic	xerophilous in tundra but

<i>gregalis</i>		habitats also abundant in grasslands, shrubs and floodplains; in steppe: prefers not typical steppe vegetation but coastal and other not dry grasslands		rather mesophilous in steppe
Root vole – <i>Microtus oeconomus</i>	from tundra to steppe	riparian habitats but prefers shrubby highly productive lush riparian vegetation along shores of small rivers and springs	mesothermic	hydrophilous
Field vole – <i>Microtus agrestis</i>	Coniferous forest	various forest and grassland habitats; in the tundra, this species inhabits patches of willow trees in shrub tundra and on floodplains	mesothermic species preferring temperate conditions	mesophilous
Middendorf's vole – <i>Microtus middendorffii</i>	Tundra and possibly coniferous forest	wet tundra biotopes and probably some forest biotops	cryothermic	hydrophilous
Wolf – <i>Canis lupus</i>	from tundra to semi-desert	various habitats	eurythermic	mesophilous
Arctic fox – <i>Alopex lagopus</i>	tundra and forest-tundra	various tundra habitats	cryothermic	mesophilous
Red fox – <i>Vulpes vulpes</i>	from tundra to semi-desert	various habitats	eurythermic	mesophilous
Brown bear – <i>Ursus arctos</i>	from tundra to forest-steppe	various habitats, prefers forest biotopes	eurythermic	mesophilous
Sable – <i>Martes zibellina</i>	forest	various forest habitats, prefers deep taiga	mesothermic	mesophilous
Wolverine – <i>Gulo gulo</i>	Tundra-forest	various habitats, prefers swampy forests	eurythermic	mesophilous
Steppe polecat – <i>Mustela</i>	from forest-	various steppe habitats	mesothermic	mesophilous

<i>eversmannii</i>	steppe to semi-desert			
Ermine – <i>Mustela erminea</i>	from tundra to steppe	various habitats, prefers moist habitats	eurythermic	mesophilous
Least weasel – <i>Mustela nivalis</i>	from tundra to desert	various habitats	eurythermic	mesophilous
European badger – <i>Meles meles</i>	from forest to semi-desert	various forest habitats, prefers semi-open habitats	mesothermic	mesophilous
Eurasian lynx – <i>Lynx lynx</i>	forest	various forest habitats	mesothermic	mesophilous
Eurasian elk – <i>Alces alces</i>	from southern tundra to forest-steppe	various forest habitats	mesothermic	mesophilous
Reindeer – <i>Rangifer tarandus</i>	tundra and taiga	various open habitats	mesothermic	mesophilous
Steppe saiga – <i>Saiga tatarica</i>	from forest-steppe to semi-desert	plain habitats, prefers areas with dense ground	mesothermic	xerophilous
Muskox – <i>Ovibos moschatus</i>	arctic desert and tundra	various tundra habitats	cryothermic	mesophilous